

Sheet 1 of 20

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FIG. 1A

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FIG. 1B

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FIG. 2A

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FIG. 2B

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FIG. 3A

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GACTTACTTCCTATTCTTTCCATTGCTTACAGCACAATGATAATTACATTACATCACCTTTGACTTT
CAAGGCCCTTACAGCTTGGCATTTCCCTCGCTAGGCCCTGTGAGGTAACGGATCGCACCTTACCCAGAGACCTGA
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TTGGGCTCTTACCGCGAGACCTGAGAGGGAGAGTCAGCC

FIG. 3B

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MADEALAGLDEGALRKLLVTADLAERRIRSAIRELQRQELEREEEALASKRFRAER
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RRVRAQEIEAATLAGRLYSGRPNSGSREDSKGGLAHRLEQCEVPEREQQAEVS
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VPGSPEPPPSPPKTTSPEPQESPTLPSTEGQVNKLSSGPKETPAAQSPTRGPSDTK
RADVAGPRPCQRSLSVLSPRQPAQNRESTPLASGPSSFQRAGSVRDRVHKFTSDSP
MAARLQDGTPQAALSPPLTPARLLGPSLTSTTPASSSSGSSSRGSPDTSSRFSKEQORG
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PGTLARLGSVTHVTSFSHAPPSSRGGCSIKMEPEPAEPLAAAVEAANGAEQTRVNKA
PEGRSPLSAEELMTIEDEGVLDKMLDQSTDFEERKLIRAALRELQRKRDQRDKERE
RRLQEARGRPGEGRGNTATETTTRHSQRAADGSAVSTVTKTERLVHSNDGTRTART
TTVESSFVRRSENGGSTMMQTKTFSSSSSKKMGSIFDREDQASPRAGSLAALEKR
QAEKKKELMKAQSLPKTSASQARKAMIEKLEKEGAAGSPGGPRAAVQRSTSFGVPN
ANSIKQMLLDWCRAKTRGYEHVDIQNFSSSDGMAFCALVHNFFPEAFDYGQLSP
QNRRQNFEVAFSSAETHADCPQLLDTEDMVRLREPDWKCVYTYIQEFYRCLVQKGL
VKTKKS

FIG. 4

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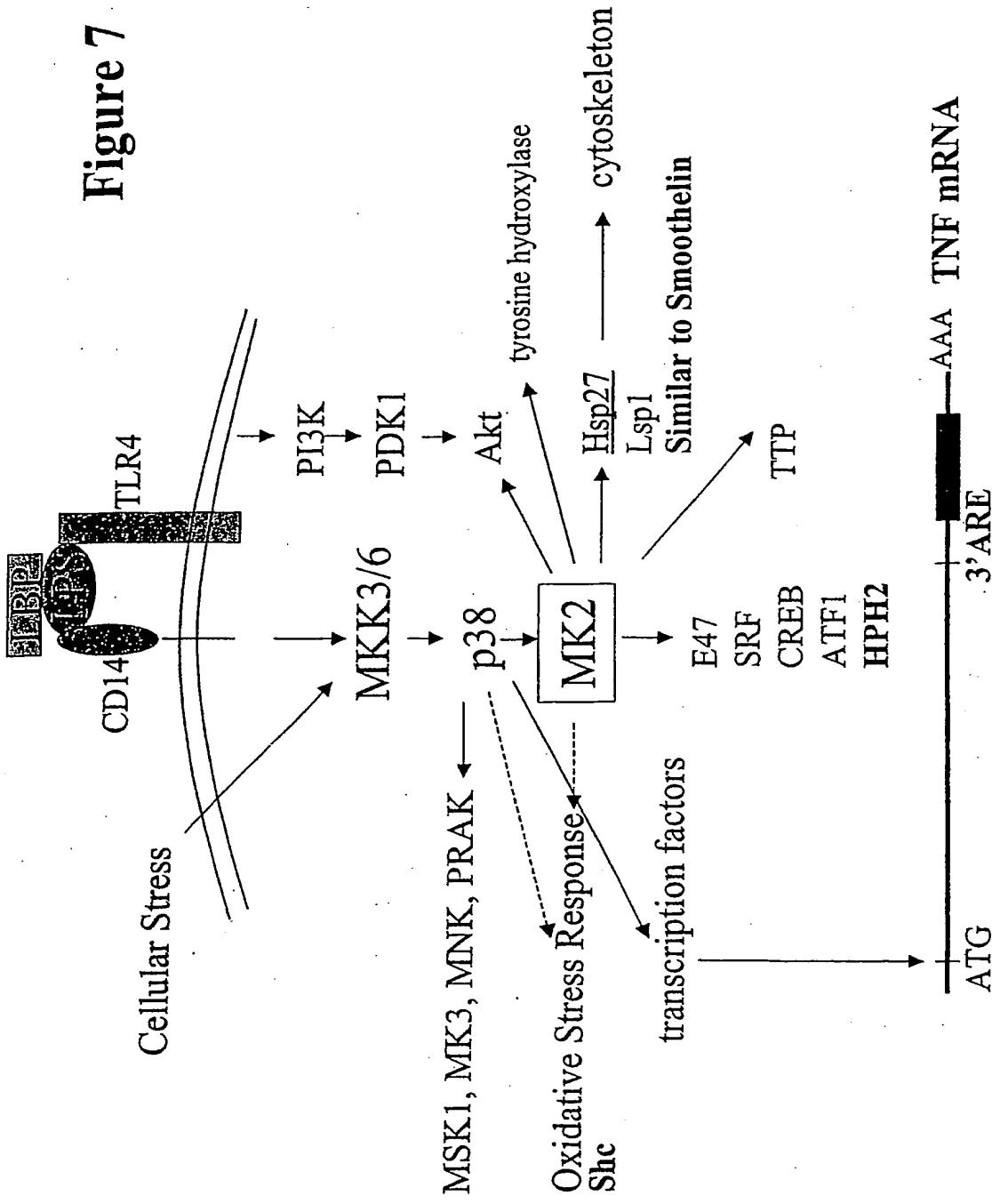
FIG. 5

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MDLLPPKPKYNPLRNESLSSLEEGASGSTPPEELPSPSASSLGPILPPLPGDDSPPLC
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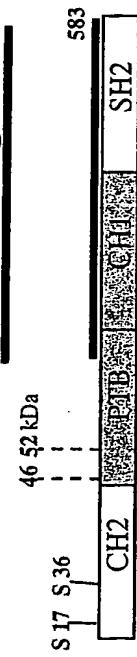
FIG. 6

Figure 7



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MK2 interacting Domain



Human Polyhomeotic 2



Similar to Smoothelin



FIG. 8

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FIG. 9A

MK2 Interactor &:	Yeast Assays			Color
	V	K93R	L	
Media: -ad, -his, -leu, -trp				-leu, -trp, X alpha GAL

Protein	Growth & Color			
	V	K93R	MK2	TPL2 Lamin
Shc A	-	+	+	-
Human Polyhomeotic 2	-	+	+	-
Smoothelin Like	-	+	+	-

FIG. 9B

MK2 Interaction Domains

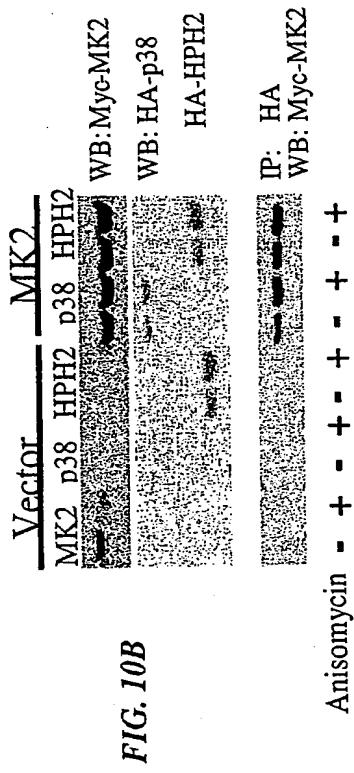
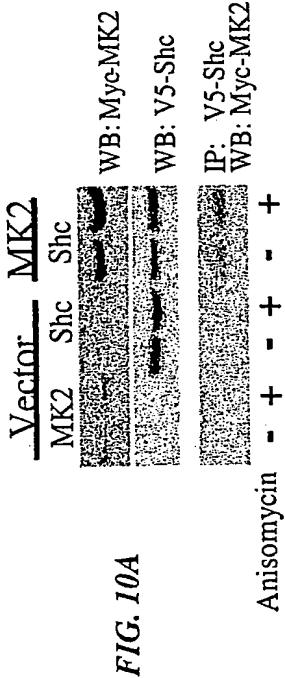


FIG. 9C



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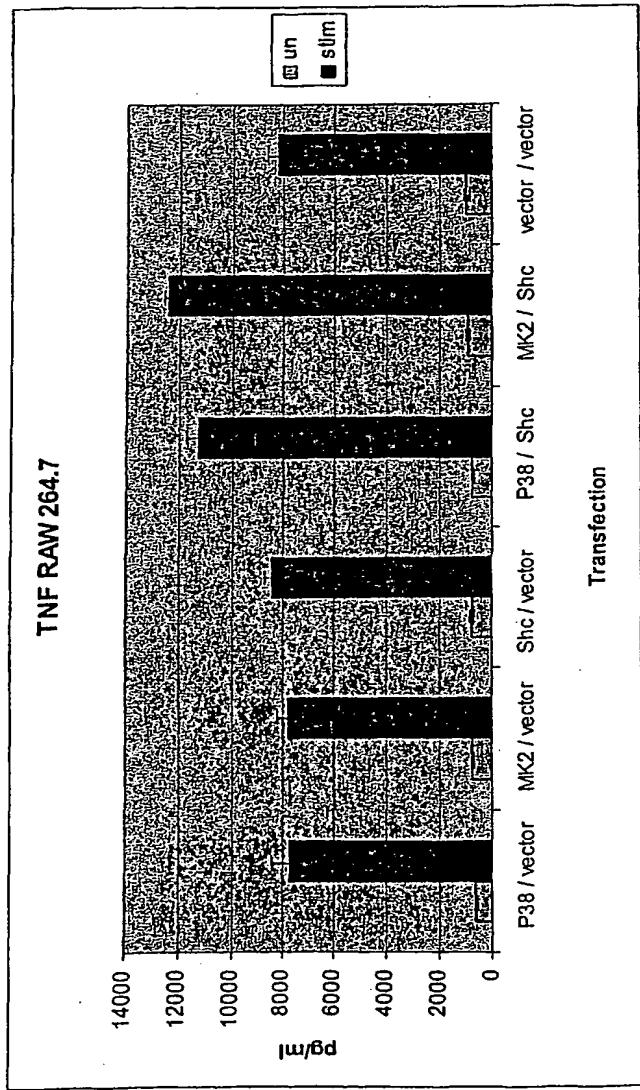
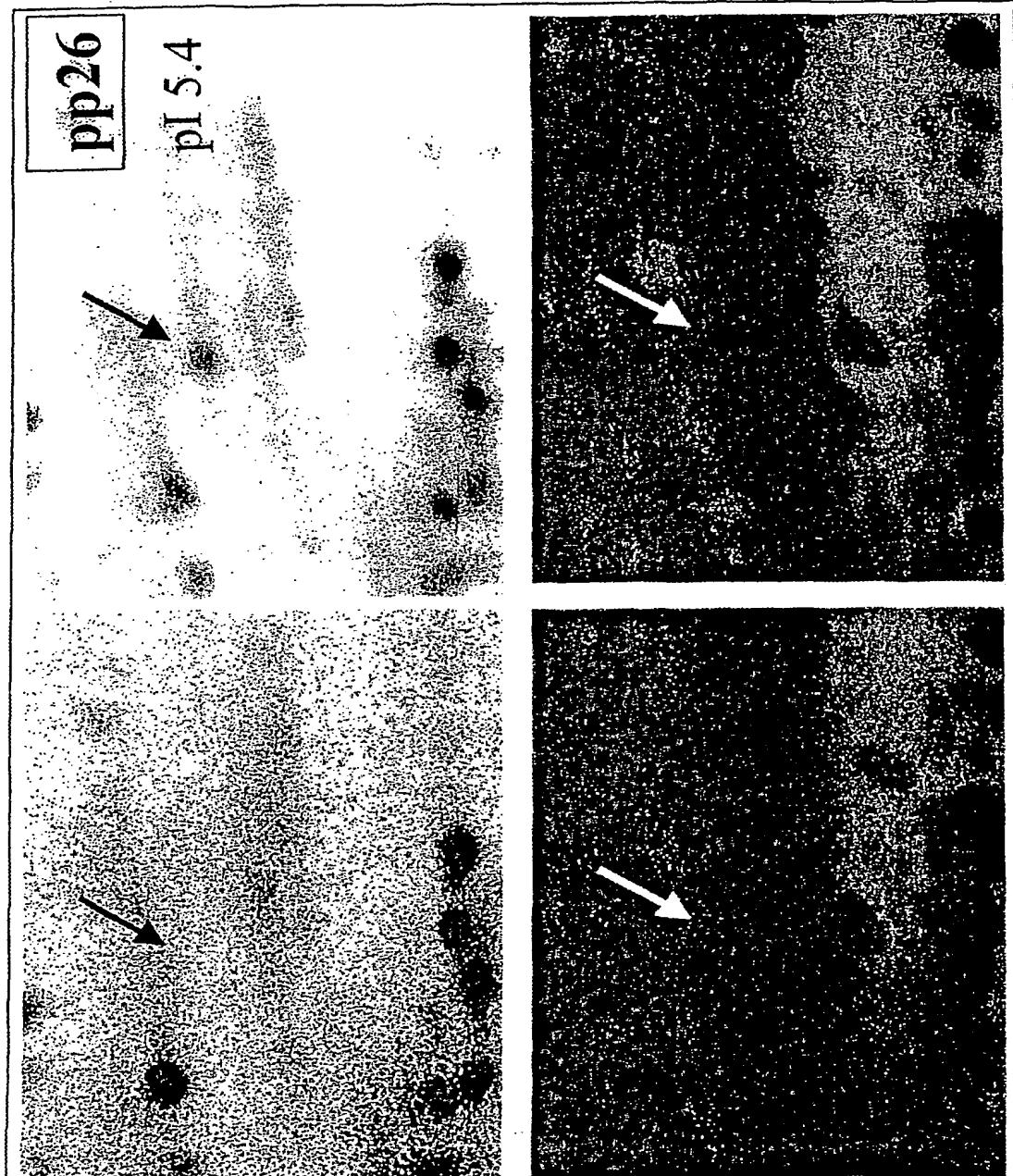


Figure 11

Figure 12

MK2^{+/+}

MK2^{-/-}



5.4
pI
5.4

B.

A.

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FIG. 13A

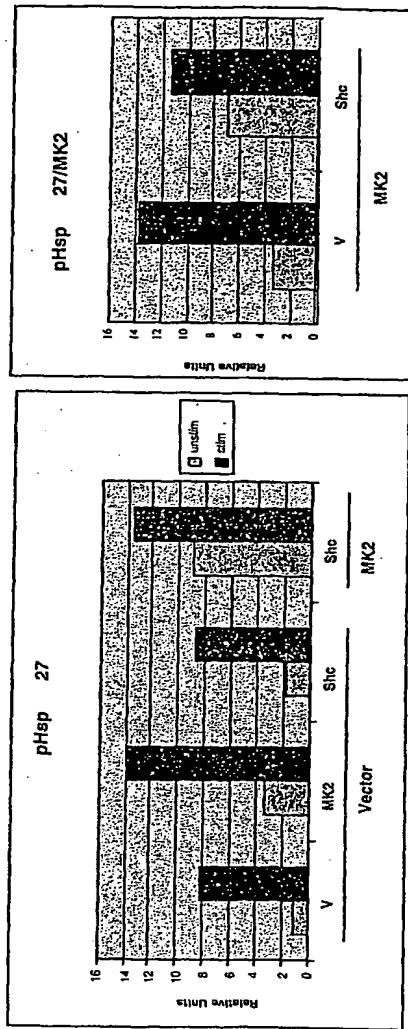


FIG. 13B
FIG. 13C

FIG. 13B
FIG. 13C

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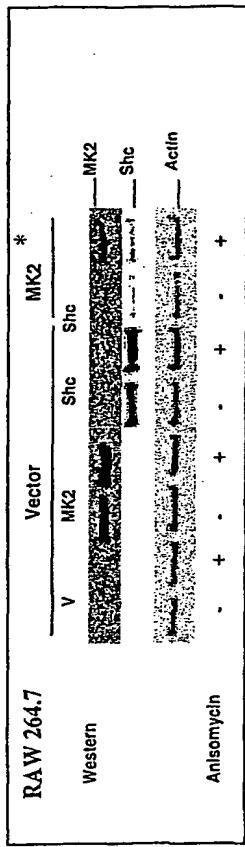


FIG. 14A

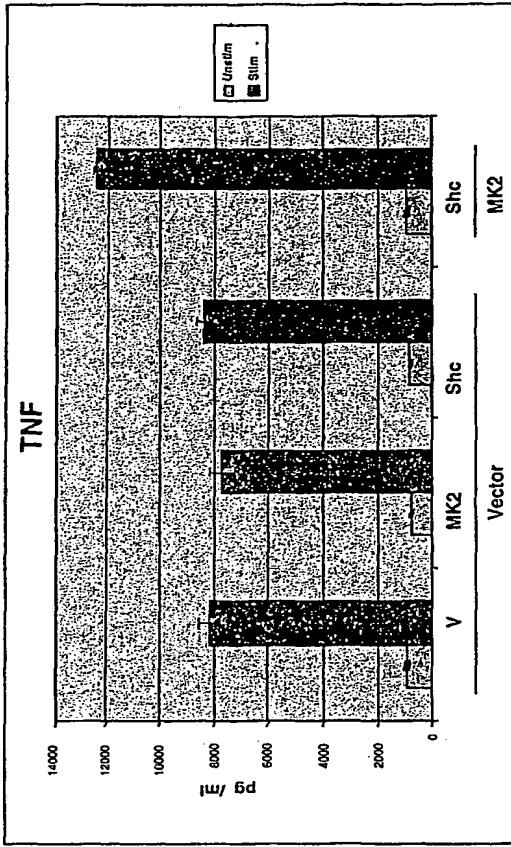


FIG. 14B

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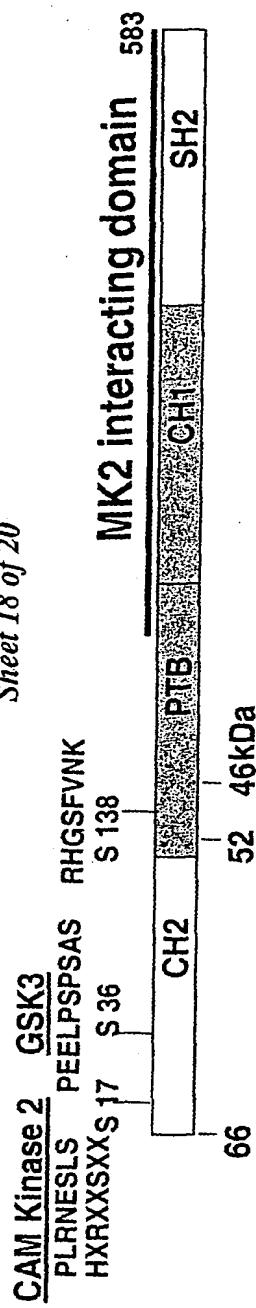


FIG. 15A

	Vector	Shc
MK2	+	-
Kinase assay	-	+
	-	-Shc

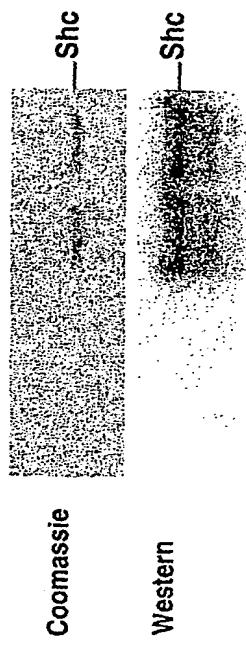
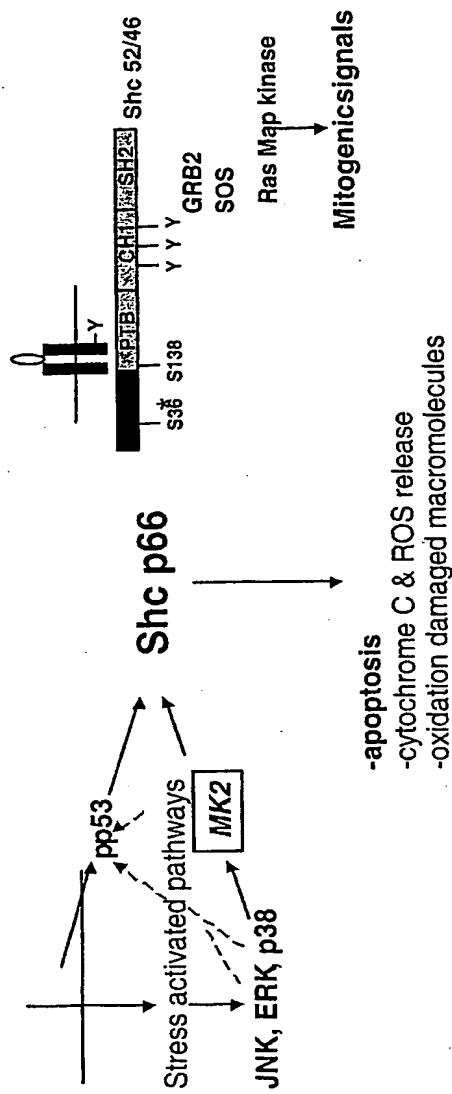


FIG. 15B

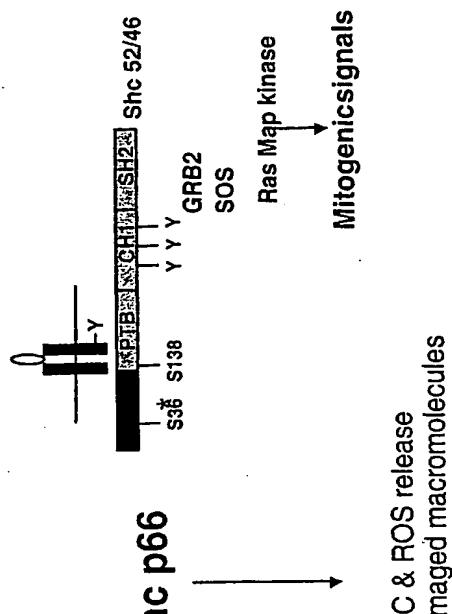
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- Stress signals: oxidative, UV



- Cell surface receptor activation



- apoptosis
- cytochrome C & ROS release
- oxidation damaged macromolecules

FIG. 16

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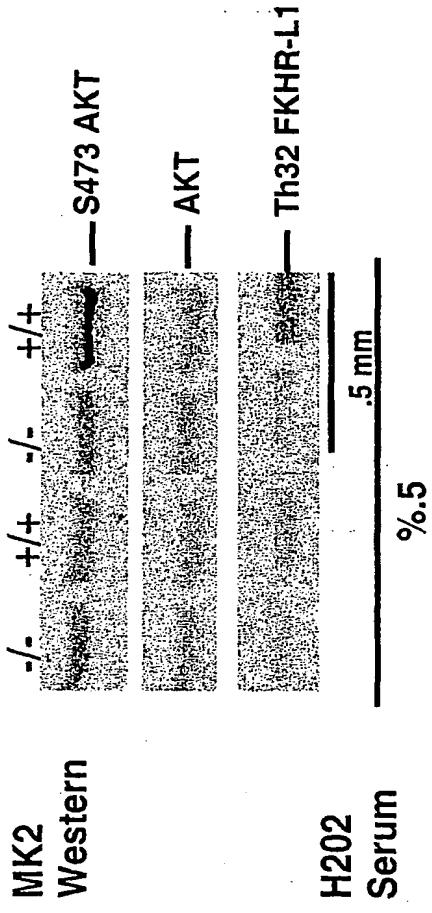
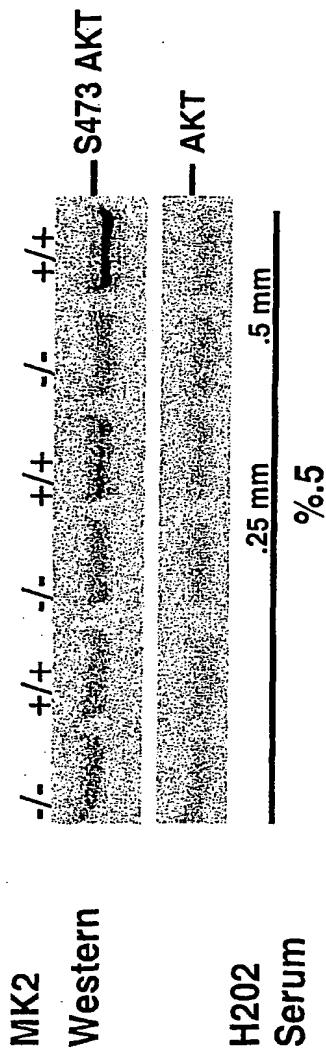


FIG. 17

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